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## ABSTRACT

This paper presents a framework useful for preschool and elementary teachers in developing a basic understanding of competency and play and their interrelationship. Specific guidelines are given for observing and planning toward increasing opportunities for competency and play. Competency is viewed as consisting of growth, risk-taking, and a positive self-concept, based on the theoretical work of Maslow, White, Rotter, and deCharms. Play is considered the child's major means of achieving competency through environmental transactions. Definitions of the elements, processes, operations, objects, and functions of play are briefly given within this context. The major implication derived from a discussion of the interrelationship between competency and play is that the more opportunities for play a child has, the greater in his potential for developing competency. Within this theoretical framework, the teacher is presented guidelines concerning: (1) analysis of the classroom environment for flexibility, information load, impact, pacing, transaction opportunities, locus of control, locus of reinforcement, and suspension of reality; (2) procedures for observing the child's transactions with the environment; and (3) intervention based on assessment of the environment and the child's transactions. (ED)

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## OBSERVING AND PLANNING FOR PLAY AND COMPETENCE

During the last few years, there has been increased attention on the development of competency and to the internal-affective determinants of behavior. At the same time, there has been renewed attention to the role of play in the development of the child. Both these trends have influenced teacher training and curriculum development, especially in early childhood education.

To many teachers, however, play and competency are still nebulous concepts or defined traditionally as dollcorner or block activity and mastery of academic skills respectively. These teachers have not yet begun to view competency as a process as well as a product, and play as a basic means for young children to achieve competency. As a result, the child's potential opportunities for play and competency in the classroom have been limited.

In order to therefore maximize such opportunities, a framework is presented below for a basic understanding of competency and play and their interrelationship, and then specific guidelines for observing and planning and so increasing opportunities for competency and play.

Competency. Much of the current concept of competency stems from Maslow's theory of self-actualization (1954), White's theory of effectance motivation (1959), Rotter's internal-external locus of control of reinforcement construct (1966), and deCharms' theory of personal causation (1968). Competency consists of growth, risk-taking and a positive self-concept. The competent individual feels that, for the most part, his own actions bring about the changes and rewards in his life and world; he is the master of his fate as opposed to the incompetent individual who feels that he is ruled by fate or by others (Rotter; deCharms). Competency may also be termed adaptability, which in order to emerge and exist, requires growth, development or change (Maslow). Growth, be it physical, affective, cognitive or verbal, requires risk-taking or trying to seek out and master the novel in the environment (White). The mastery is a personal and social "pat on the back" and over a period of time results in a positive self-concept and a feeling of being effective and worthy. This in turn encourages risk-taking to reinforce and increase the positive self-concept.

A Construct of Play. The child's major means to achieve competency is play. During play there is a freewheeling discovery, exploration and mastery of the self and of the world. Simply defined, play is self-directed

activity, purposeful activity, adaptation of self and of the environment.

Numerous elements of play have been identified by different investigators (Ellis, 1973; Millar, 1968; Neumann, 1971). These elements may be grouped into the criteria, the process and the objectives of play (Neumann, 1971). The criteria are the elements that distinguish play from non-play. They include internal control, internal reality and intrinsic motivation. The process is the form and method of playing. The objectives are those elements towards which play is directed, and include subjects, objects, functions and locations.

The act of play can be defined as a transaction, namely playing with something that plays with the player. During play a child enters into a relationship with the environment. This relationship is a process of continuous manipulation that results in a back and forth dynamic. The nature of the child and of the environment at that moment place certain conditions on the relationship which determines the specific process and objectives of the relationship. The transaction of play is a complete behavioral episode, which consists of an initiation, enaction and completion of activity. Through the transaction, the child learns about himself and his social and physical environment.

The criterial of play, more specifically, are internal reality, intrinsic motivation and internal locus of control of the activity. Non-play occurs when there is external reality, external locus of control and extrinsic motivation. Play and non-play are not absolutes, but at the two opposing ends of a continuum. Play implies freedom of the child and his activity while non-play implies restriction of the child and his activity.

Internal reality is a criterion of play since during play, the player suspends reality in order to establish the rules, procedures and content of his play according to his wishes. Play cannot occur when the child is bound to external neccessity such as the demands of survival.

Intrinsic motivation occurs in play since the player is self-motivated to engage in the activity and is concerned with the process and purpose inherent in the activity. On the other hand, during an activity that is not play, the child is motivated by a goal that is external to the activity.

The locus of control in play is with the player. The process and objectives of play are self-determined while in non-play they are determined by external factors and agents. Occasionally, play occurs under cooperative control: the player may share decisions about his play with one or more others.

The process of play consists of four modes and four operations. The operations occur in a developmental sequence. The modes are the basic forms of interaction between the child and the environment. Play can assume one of four modes: (1) sensori-motor, or physical interaction, (2) affective, or social-emotional interaction, (3) verbal, or oral interaction, and (4) cognitive, or abstract mental interaction.

The operations of play are: (1) exploration, (2) repetition, (3) replication, and (4) transformation of the skills and information acquired during the child's transactions with the environment. During exploration the child investigates novel stimuli in his environment. Repetition occurs in order to verify the data received from the environment. During replication, the child, by imitation, reconstructs the data as it exists in the environment. Eventually, the child transforms, or recombines, the data into a novel product. The operations fall into a developmental sequence. This developmental sequence describes the order of operating during a complete play episode, and the developmental progression of the process of play as the child increases in age, experience and skill.

Play may occur with subjects, with objects, for functions and at locations. Subjects of play may be the individual player himself, other children or adults.

Objects of play may be categorized as (1) real objects that have a specific identity and function in reality, (2) toys, or miniature replicas of real objects, (3) instructional materials, or objects designed to teach specific information or skills, and (4) multi-purpose materials, or objects with a non-specific identity and function.

The functions of play include (1) information seeking, (2) social learning, (3) sensori-motor activity, (4) emotional expression and (5) creative expression.

The location of play may be internal, within the organism, or external to the child, namely within the environment. For example, some forms of thought could be termed cognitive play. This is an internal location: play is covert, non-observable. In addition, play can occur in a diversity of prepared school environments, on the street, or in the home. These are examples of an external location of play.

The Relationship Between Play and Competence. Play fosters competence because it is self-directed behavior and provides expertise and encouragement for future self-directed behavior. A considerable body of theory and research points out that play seems to facilitate emotional development (Freud, 1922; Erikson, 1963), social development (Parten, 1939; Murphy, 1957)

sensori-motor and cognitive development (Piaget, 1952), and creativity (Lieberman, 1967). Play also provides opportunity for mastery, self-knowledge and feelings of self-worth.

During play, the child's interaction with his environment is matched with his interests and abilities. In short, the interaction is based on and within the extent of past and present competencies. During play, the child has the opportunity to approach the novel, the dissonant, the problems in his environment or life-space. Because there is suspension of reality, he can securely take a variety of risks or alternate approaches to coping with the problem and see what the consequences of each risk and solution are. He then can select the best possible approach to coping with the problem and apply it to the situation in reality. The degree of risk has been diminished and the possibility of mastery and sustained positive self-concept has been increased.

The major implication is that the more opportunities for play a child has, the greater is his potential for developing competency. As the opportunities for exploring ways to deal with the self and the environment increase, the probability of dealing effectively with the self and the environment also increases.



A Framework for Observing and Planning. Based on the theory and research on competency and play cited above, the competent individual may be described as one who (1) has the flexibility to adapt to a variety of situations, because (2) he has acquired a range of information and skills, and thus (3) has an impact on his environment, namely effects changes, (4) by interacting with the environment, (5) according to his needs and abilities. As a result, the competent individual (6) controls himself and his environment, (7) by pursuing self-established goals to acquire self-established rewards, and (8) by establishing a personal reality and self-concept reflecting a positive compromise between individual needs and interests as well as sociocultural demands.

In order to maximize the opportunities for developing competency in the individual child, these elements (flexibility, information load, impact, interaction, pacing, locus of control, locus of reinforcement, suspension of reality) must be included in the environment. As a result, the child's transactions with the environment will be directed as much as possible toward acquiring competency. For the teacher, this implies (1) analysis of the environment to determine its competency potential, (2) observation of the child's transactions with the environment to

to determine the level of play and competency, and (3) intervention with the environment and the child to extend competency and play.

1. The components of an environment include physical arrangement of space and equipment, materials, program or daily schedule, rules, adults, peers or other children, and the child himself. Analysis of the environment identifies elements of competency within individual components and among the interaction of several or all components. Analysis would include the following questions:

**FLEXIBILITY:** Is the information and structure of the environment adapted to individual needs and abilities? What is the range of materials, experiences, feelings? What are the opportunities for change?

**INFORMATION LOAD:** What information and skills (facts, concepts, relationships) are available to support and foster individual development? What are the sources, range and forms of information?

**IMPACT:** What is the affect-effect of the environment? Dissonance--does it arouse the child to interact? Intensity--what is the extent of arousal? Meaningfulness-- are new experiences related to past learnings?

**PACING:** Can the child interact at his own rate, or developmental level? Can the child establish goals and procedures on his own, and for himself?

TRANSACTION OPPORTUNITIES: What are the source, range, frequency, content and consistency of transactions available to and carried out by the child?

LOCUS OF CONTROL: What are the constraints and choices in the environment? Who or what is in control generally? When? Why?

LOCUS OF REINFORCEMENT: What are the sources and forms of payoffs--the expectations and rewards, spoken and unspoken? How and by whom are they determined?

SUSPENSION OF REALITY: What are the opportunities for establishing personal reality (self-identity; self-concept), and for discovering ways to cope with external reality? How many dimensions of reality are available or can be developed?

2. Observation of the individual child's transactions with the environment includes two procedures. First, identification of the elements of play, specifically the process and objectives, as defined in the construct of play above, provides an assessment of the range and development of play, and an assessment of developmental competency. Second, identification of the elements of competency in the child's transactions, provides an assessment of the child's present level of general competency (flexibility, information, impact, etc.).

3. The final step is intervention by the teacher. Based upon the assessment of the environment and the child's transactions, specific components of the environment should be altered so that more of the elements of competency are present. This could be, for example, rearrangement of furniture to allow more flexible use of space and provide greater impact, or relinquishing more control (selection, use) about materials and activities to the children.

In addition, analysis of play in terms of the construct described earlier, can provide suggestions for the teacher's guidance of individual children and addition or omission of materials and experiences to extend the process and objectives of play. This could be, for example, explaining, demonstrating and supporting transformation operations, affective modes, multi-purpose materials, or creative expression.

In conclusion, the teacher should keep in mind that analysis of the environment, observation of the child, and intervention with both, must be a continuous process in order to initially establish potential for play and competency and then to provide for development of play and competency. The more playful the environment, the more playful and competent the individual child becomes.

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## ENVIRONMENTAL COMPLEXITY AND RISK TAKING

### Observing and Planning for Competency and Play

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#### ENVIRONMENTAL COMPLEXITY

1. **FLEXIBILITY:** Is the information and structure of the environment adapted to individual needs and abilities? What is the range of materials, experiences, feelings? What are the opportunities for change.
2. **INFORMATION LOAD:** What information and skills (facts, concepts, relationships) are available to support and foster individual development? What are the sources or forms of information?
3. **IMPACT:** What is the affect-effect of the environment on Dissonance: Does it arouse the child to interact? Intensity: What is the extend of arousal? Meaningfulness: Are new experiences related to past learnings?
4. **PACING:** Can the child interact at his own rate, or developmental level?  
Can the child establish goals and procedures on his own, and for himself?
5. **INTERACTION OPPORTUNITIES:** What is the range, source frequency and consistency of interactions available to the child?
6. **LOCUS OF CONTROL:** What are the constraints and choices in the environment?  
Who or what is in control? When? Why?
7. **LOCUS OF REINFORCEMENT:** What are the sources and forms of payoffs -- the expectations and rewards, spoken and unspoken? How and by whom are they determined?
8. **SUSPENSION OF REALITY:** What are the opportunities for establishing personal reality (self-identity/concept) and for discovering ways to cope with external reality? How many dimensions of reality are unavailable or can be developed?

	Phys Arr	Mat	Progr	Rules	Adults	Peers	Self
1. Flexibility							
2. Information Load							
3. Impact - dissonance							
intensity							
meaningfulness							
4. Interaction Opportunities							
5. Pacing							
6. Locus of Control							
7. Locus of Reinforcement							
8. Suspension of Reality							

### RISK TAKING

1. **ASSESSMENTS:** Does the child show anxiety, fear, caution, hesitation, impulse, avoidance, or withdrawal? Does the child seek help from adults or from children? Is there intermittent return to the risk? In other words, initial confrontation of the risk, partial assessment and finally involvement with the risk.
2. **EXPLORATION:** What is the pattern of exploration --- impulsive, hurried, random or cautious and systematic? Is exploration continuous or with intermittent returns? What is the number and nature of the alternatives identified? Is help sought? Why and from whom?
3. **COURSE OF ACTION:** What is the logic, correctness or sense of the course of action? Is it systematic, or random? Is it increasingly systematic? Is there implementation of the alternatives identified earlier? What is the basis for accepting or rejecting the course of action? Is there repetition for mastery? Is there interruption or return over a period of time during an hour or two hours, during the entire school day or over a period of several days, or several weeks with increased mastery? Is help or reinforcement sought? From whom and why? As competency in the task increases or understanding of the task increases is a decreasing amount of help sought?
4. **COMPLETION:** What is the degree or level of mastery of the task or of the risk that the child has achieved? Has the level been established by the child himself, by an adult or by other children? Does reinforcement for the mastery come from the task itself, the child himself, an adult or other children? Does reinforcement source vary with different types of risks?
5. **TRANSFERENCE:** Is there an increase in the number of risks assumed by the child? Is there an increase in the quality or extent of risks assumed by the child after achievement of their specific mastery? Are there diversions or similarity of new risks to old mastered risks? In other words, having mastered the task of stacking blocks, does the child now remain with blocks and attempt to gain mastery of other problems with blocks or does the child engage in new risks, such as painting, working with numbers, sand play or reaching the top of a climbing apparatus.